



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,106	03/18/2004	Jong Hyun Woo	LT-0059	5307
34610 7590 07/12/2007 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200				
			EXAMINER SIM, YONG H	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,106	WOO, JONG HYUN	
	Examiner	Art Unit	
	Yong Sim	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 19 and 21 - 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 19 and 21 - 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 11 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that there is no suggestion in the prior art for utilizing Nitta's EDID data within Nuimura's system to derive a PWM frequency of an inverter and drive an LCD in accordance with the derived PWM frequency of the inverter (Applicant: Pg. 12).

Examiner respectfully argues that Nuimura clearly suggests a method of deriving a PWM frequency according/utilizing to a frame frequency, but does not expressly discuss the frequency in a memory (Office action: pg. 7). However, Nitta's idea of storing a frame frequency/display information in a memory and utilizing the information/frequency to optimize/derive the display thereby satisfies the combination of Nuimura and Nitta for the rejection.

Furthermore, with the Applicant's introduction of the new limitation EDID, Examiner appropriately rejects the claims as being anticipated by Nitta in view of Nuimura.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2629

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant fails to disclose the "LCD lamp information" in the specification. Therefore, for the purpose of art rejection the "replacement LCD lamp" will be construed as an "LCD information."

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 states that "the LCD" is adapted to receive a plurality of LCD lamps. It is unclear from the claim and the specification whether an LCD can receive a plurality of LCD lamps or not. The applicant also states in Para 0051, lines 2 – 3; "an LCD lamp

preferably included in the LCD.” Therefore, for the purpose of art rejection, as best understood by the examiner, the claims will be interpreted as stated below;

18. The apparatus of claim 11, wherein the apparatus is adapted to receive a plurality of LCDs (lamps are included in the LCDs), and wherein at least two of the LCD lamps have different frame frequencies.

The limitations to claim 23 are substantially similar to the limitations of claim 18. Therefore, it has been rejected substantially similar to claim 18.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1 – 3, 6 – 17, 19 and 21 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al. (US 2001/0004257 A1, hereinafter “Nitta”) in view of Nuimura (US 2004/0008176 A1).

Re claim 1, Nitta teaches a method for identifying an LCD (Para 0006; “display apparatus such as liquid crystal display) frame frequency recorded in extended display identification data (EDID) of a memory provided in an LCD (Para 0011; “display has specification information already stored in its memory. This specification information is called EDID, and included, for example, frame rate.) to automatically make optimal settings for a proper display;

But does not specifically disclose controlling an inverter pulse width modulation (PWM) frequency of a liquid crystal display (LCD) in a portable computer, comprising:

deriving a PWM frequency of an inverter adapted to control a brightness of the LCD responsive to the identified LCD frame frequency; and

driving the LCD in accordance with the derived PWM frequency of the inverter for optimal display settings.

However, Nuimura teaches a method for controlling an inverter (inverter 4a) [Nuimura: Fig. 1] pulse width modulation (PWM) frequency of a liquid crystal display (LCD) [Nuimura: Para 0004; “display devices such as LCD used in notebook.”] in a portable computer [Nuimura: Para 0027, lines 24 - 29; “the CPU determines the frequency f_c of the PWM signal S_c by inputting the frequency of the vertical synchronization frequency f_v specified by frequency data D_f .”], comprising:

Art Unit: 2629

deriving a PWM frequency of an inverter adapted to control a brightness of the LCD responsive to the identified LCD frame frequency [Nuimura: Para 0012, lines 4 - 8; "a duty ratio of a brightness control signal to be output to a lighting device by controlling a frequency of the brightness control signal in response to a vertical synchronization frequency." The vertical synchronization is equivalent to the frame frequency of 60Hz of NTSC system as described in line 9 of Para 0031.];

and driving the LCD in accordance with the derived PWM frequency of the inverter, [Nuimura: Para 0034, lines 1 – 5; "generates the driving signal Sd in response to the inputted PWM signal Sc, and the fluorescent lamp 4b is driven thereby."]

Therefore, taking the combined teachings of Nitta and Nuimura, as a whole, it would have been obvious to a person having ordinary skill in the art to incorporate the idea of controlling a PWM frequency of an inverter based on a frame frequency as taught by Nuimura into the method of identifying an LCD display information, including a frame frequency, in an EDID to obtain a method wherein display information such as frame frequency identified in an EDID is used to derive a PWM frequency of an inverter to correspondingly drive an LCD to avoid the display quality of a monitor by reducing the switching noise which is caused by incompatibility of a frame frequency and the display device (Nuimura: Para 0010).

Re claim 2, Nitta teaches the method of claim 1, wherein the LCD frame frequency is identified by a vertical sync frequency recorded in the EDID (Para 0011;

"Extended Display Identification Data, which includes, the resolution, frequency of vertical scan signals, frame rate...")

Re claim 3, the combined teachings of Nitta and Nuimura teach the method of claim 1, wherein the memory is a non-volatile memory (Nitta discloses a method of storing EDID (extended Display Identification Data), which includes, the resolution, frequency of vertical scan signals, frame rate, vender code and the serial number in the memory of a Plug-and-Play compatible display apparatus [Nitta: Para 001]. As described by Nitta, the EDID is stored in memory.

Although Nitta does not explicitly state that the memory is a non-volatile memory, it is obvious to a person having ordinary skill in the art to realize that EDIDs must be stored in a non-volatile memory to achieve its purpose of retaining the monitor information/identity including the vendor information or the serial number, thereby preventing the loss of the monitor information when the monitor is disconnected from its power source.

The limitations to claim 6 are substantially similar to the limitations of claim 2. Therefore, claim 6 has been analyzed and rejected substantially similar to claim 2.

Re claim 7, Nuimura teaches the method of claim 1 wherein, the PWM frequency of the inverter is derived using an equation "PWM frequency= $V_{sync} \cdot n - m$ " where V_{sync} is a vertical sync frequency for the LCD, n is a positive integer and m is a constant

selected in a range of 15 Hz to 30 Hz (Nuimura teaches an equation " $f_c(\text{PWM frequency}) = (n \pm \frac{1}{2}) \times f_v(\text{Vsync})$ " where n is a natural number/positive integer and m is $\frac{1}{2}$ which is a constant [Para 27 – 28]. Nuimura gives an example where f_v is 60Hz where the equation would become " $f_c = f_v \cdot n \pm \frac{1}{2} \cdot f_v$ " In this case the constant $\frac{1}{2}$ when derived would fall in range of 15 – 30 Hz since f_v is 60Hz [Para 32].

Re claim 8, Nuimura teaches the method of claim 7, wherein values of " n " and " m " are set to 4 and 30, respectively (As described by Nuimura in claim 7, " n " is a natural number meaning that it can be 4 as claimed by Applicant. " m " being 30 has already been analyzed and discussed in claim 7.).

The limitations to claim 9 are substantially similar to the limitations of claim 1. Therefore, claim 9 has been analyzed and rejected substantially similar to claim 1. With respect to the replacement LCD, Nitta teaches Plug-an-Play/replacement compatible displays wherein different displays output different EDID information for the displaying images properly according to the specifications (Para 0013).

The limitations of claim 10 are substantially similar to the limitations of claim 6. Therefore it has been analyzed and rejected substantially similar to the rejection of claim 6.

Re claim 11, Nitta teaches an LCD (Para 0006; "display apparatus such as liquid crystal display) frame frequency recorded in extended display identification data (EDID) of a memory provided in an LCD (Para 0011; "display has specification information already stored in its memory. This specification information is called EDID, and included, for example, frame rate.) to automatically make optimal settings for a proper display;

But does not specifically disclose an apparatus controlling an inverter pulse width modulation (PWM) frequency of a liquid crystal display (LCD) in a portable computer, comprising:

deriving a PWM frequency of an inverter adapted to control a brightness of the LCD responsive to the identified LCD frame frequency; and

driving the LCD in accordance with the derived PWM frequency of the inverter for optimal display settings.

However, Nuimura teaches an apparatus that controls an inverter (inverter 4a) [Nuimura: Fig. 1] pulse width modulation (PWM) frequency of a liquid crystal display (LCD) [Nuimura: Para 0004; "display devices such as LCD used in notebook."] in a portable computer [Nuimura: Para 0027, lines 24 - 29; "the CPU determines the frequency f_c of the PWM signal S_c by inputting the frequency of the vertical synchronization frequency f_v specified by frequency data D_f ."], comprising:

deriving a PWM frequency of an inverter adapted to control a brightness of the LCD responsive to the identified LCD frame frequency [Nuimura: Para 0012, lines 4 - 8; "a duty ratio of a brightness control signal to be output to a lighting device by controlling

a frequency of the brightness control signal in response to a vertical synchronization frequency.” The vertical synchronization is equivalent to the frame frequency of 60Hz of NTSC system as described in line 9 of Para 0031.];

and driving/controlling the LCD in accordance with the derived PWM frequency of the inverter, [Nuimura: Para 0034, lines 1 – 5; “generates the driving signal Sd in response to the inputted PWM signal Sc, and the fluorescent lamp 4b is driven thereby.”]

Therefore, taking the combined teachings of Nitta and Nuimura, as a whole, it would have been obvious to a person having ordinary skill in the art to incorporate the idea of controlling a PWM frequency of an inverter based on a frame frequency as taught by Nuimura into the apparatus of identifying an LCD display information, including a frame frequency, in an EDID to obtain an apparatus wherein display information such as frame frequency identified in an EDID is used to derive a PWM frequency of an inverter to correspondingly drive an LCD to avoid the display quality of a monitor by reducing the switching noise which is cause by incompatibility of a frame frequency and the display device (Nuimura: Para 0010).

The limitations of claim 12 are substantially similar to the limitations of claim 2. Therefore, it has been analyzed and rejected similar to the rejection of claim 2.

Re claim 13, Nitta teaches the apparatus of claim 12, wherein the memory includes identification data for a plurality of LCDs (Nitta discloses method of storing

EDID (extended Display Identification Data), which includes, the resolution, frequency of vertical scan signals, frame rate, vender code and the serial number in the memory of a Plug-and-Play compatible display apparatus where the information varies with models of display apparatus [Nitta: Para 0011]. The different models/(plurality) hold different information in its own memory. Therefore the identification data for each LCD is stored in its memory.

Re claim 14, the combined teachings of Nuimura and Nitta teach that the control means sets the PWM frequency of the inverter to a frequency that does not substantially interfere with the vertical sync frequency (Nuimura teaches that a frequency of the brightness control signal/(PWM frequency of the inverter) is controlled by a control unit in response to a vertical synchronization frequency/(avoids synchronization/interference; see [Nuimura: Para 0010, lines 4 – 10]) in order to avoid switching noise [Nuimura: Para 0012, lines 4 – 8]).

The limitations of claim 15 are substantially similar to the limitations of claim 6. Therefore, it has been analyzed and rejected similar to the rejection of claim 6.

The limitations of claim 16 are substantially similar to the limitations of claim 7. Therefore, it has been analyzed and rejected similar to the rejection of claim 7.

The limitations of claim 17 are substantially similar to the limitations of 8. Therefore, it has been analyzed and rejected similar to the rejection of claim 8.

The limitations of claim 19 are substantially similar to the limitations of 2. Therefore, it has been analyzed and rejected similar to the rejection of claim 2.

The limitations of claim 21 are substantially similar to the limitations of 11. Therefore, it has been analyzed and rejected similar to the rejection of claim 11. With respect to the processor, Nuimura teaches a CPU/processor coupled to the display (See fig. 1. 3c contains a CPU and is coupled to a display device 2).

Re claim 22, Nuimura discloses the portable computer of claim 21, wherein the display is rotatably coupled to the base module. It is inherent a notebook computers as described by Nuimura has the configuration such as the display being rotatably being coupled to the base in such a manner to mimic the configuration of a "notebook." Such as rotating the display for closing and opening the computer.

4. Claim 4 – 5, 18 and 23 - 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al. (US 2001/0004257 A1, herein after "Nitta") in view of Nuimura (US 2004/0008176) as applied to claims 1 – 3, 6 – 17, 19 and 21 – 22 above, and further in view of Wada et al. (US 5,977,934, herein after "Wada").

Re claim 4, Nitta and Nuimura as a whole teach the method of claim 1.

But fail to disclose the portable computer that is configured to receive a plurality of LCDs, wherein at least two of the LCDs have different frame frequencies.

However, Wada teaches the method of configuring an information processing apparatus to receive a plurality of LCD's ("TFT LCD" 2, "STN LCD" 9) [Wada: Fig. 2, Col. 2 lines 33 - 45], wherein the LCDs have different frame frequencies [Wada: Fig. 9C shows a FP, Frame Pulse/Frame frequency, that determines the beginning and the end of one screen in TFT LCD [Col. 5, lines 33 – 37], and Fig. 12C shows a FP of an STN LCD. The figures show that the lengths of the FP's are different from each other, therefore the frame frequencies are different.]

Therefore, taking the combined teachings of Nuimura, Nitta and Wada as a whole, it would have been obvious to a person having ordinary skill in the art to incorporate the method of receiving plurality of LCD's of as taught by Wada to the method claim 1 as taught by Nuimura and Nitta to obtain a method of receiving plurality of LCD's with different frequencies so that any one of a plurality of types of display devices can be connected to a common information processing apparatus main unit. [Wada: Col. 2, lines 25 – 28]

Re claim 5, Nuimura, Nitta and Wada as a whole teach the method of claim 4.

But does not teach that the plurality of LCDs is made by different vendors.

However, the STN LCD and TFT LCD as disclosed by Wada, would differ not only in quality, but also in the manufacturing process. [Col 1, lines 56 – 67].

Therefore, it would have been obvious to a person having ordinary skill in the art to realize that LCDs of different types would be provided by different vendors to accommodate accessibility and availability of a user.

The limitations of claim 18 are substantially similar to the limitations of 4. Therefore, it has been analyzed and rejected similar to the rejection of claim 4.

The limitations of claim 23 are substantially similar to the limitations of claim 18. Therefore, it has been analyzed and rejected similar to the rejection of claim 18.

The limitations of claim 24 are substantially similar to the limitations of claim 14. Therefore, it has been analyzed and rejected similar to the rejection of claim 14.

Re claim 25, the combined teachings of Nuimura, Nitta and Wada teach the portable computer of claim 24.

But does not teach that the memory is provided in a lamp of the LCD or in the LCD.

However, Examiner takes an official notice that it is well known in the art to use an EEPROM for the memory that stores EDID.

Therefore, it would have been obvious to use EEPROM for storing EDID in the memory to retain the display information even when the power is not applied to the system.

5. Claims 26 – 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al. (US 2001/0004257 A1, herein after “Nitta”) in view of Nuimura (US 2004/0008176) as applied to claims 1 – 3, 6 – 17, 19 and 21 – 22 above, and further in view of Acharya et al. (Hereinafter “Acharya”).

Re claim 26, the combined teachings of Nitta and Nuimura teach the portable computer of claim 21.

But does not expressly disclose wherein the EDID includes a minimum frame frequency and a maximum frame frequency, and the controller controlling the PWM frequency based on the minimum frame frequency or the maximum frame frequency.

However, Acharya teaches a system for display of information on an external display using a handheld computing device wherein the EDID information describes a monitor's characteristics (e.g., vendor name, serial number, frequency range/minimum to maximum) (Acharya: Para 0086)

Therefore, taking the combined teachings of Nitta, Nuimura and Acharya, as a whole, it would have been obvious to a person having ordinary skill in the art to incorporate the idea of having a minimum and maximum frequency range as taught by Acharya into the portable computer wherein the PWM frequency is derived from the frequency received as taught by Nitta and Nuimura to obtain a portable computer

wherein a range of capable frame frequency is stored in an EDID to derive the PWM based on the minimum to maximum frequency received from the EDID so that appropriate output format configuration can be automatically made by utilizing the information in the EDID (Acharya: Para 0086).

Re claim 27, the combined teachings of Nitta, Nuimura and Acharya teaches the portable computer of claim 21, wherein the EDID includes a range of frame frequency, and the controller controls the PWM frequency based on the average frame frequency.

But does not expressly describe controlling the PWM frequency based on the average frame frequency.

However, Applicant describes in Para 36 of the specification that the LCD frame frequencies may be "alternatively" expressed by an average frame frequency.

Therefore, it would have been an obvious matter of design choice to have an average frame frequency for controlling the PWM frequency for optimal performance of the LCD.

The limitations of claim 28 are substantially similar to the limitations of 26. Therefore, it has been analyzed and rejected similar to the rejection of claim 26.

The limitations of claim 29 are substantially similar to the limitations of claim 27. Therefore, it has been analyzed and rejected similar to the rejection of claim 27.

The limitations of claim 30 are substantially similar to the limitations of 26.
Therefore, it has been analyzed and rejected similar to the rejection of claim 26.

The limitations of claim 31 are substantially similar to the limitations of claim 27.
Therefore, it has been analyzed and rejected similar to the rejection of claim 27.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Sim whose telephone number is (571) 270-1189.

Art Unit: 2629

The examiner can normally be reached on Monday - Friday (Alternate Fridays off) 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YHS
6/29/2007

AMR A. AWAD
SUPERVISORY PATENT EXAMINER
Amr Awad